

BERGEN COUNTY

Cancer Control and Prevention Capacity and Needs Assessment Report Summary

December 2004

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Notices:

Medicine is an ever-changing science. As new research and data broaden our knowledge, conclusions may change. The authors and reviewers have endeavored to check the sources of information and to utilize sources believed to be the most reliable in an effort to provide information that is as complete as possible at the time of submission and generally in accord with appropriate standards. However, in view of the possibility of human error or changes in medical science, this work cannot be warranted as being complete and accurate in every respect. Readers are encouraged to confirm the information contained herein with other sources. Information concerning some of the sources of data, rationale for its utilization, acknowledgements of specific parties contributing to these efforts, as well as links to cancer-related information may be found at www.umdj.edu/evalcweb/.

This county-level Report Summary summarizes the larger county report, which is a baseline evaluation of this county, performed as part of the Capacity and Needs Assessment initiative of the New Jersey Comprehensive Cancer Control Plan (www.state.nj.us/health/ccp/ccp_plan.htm), under the direction of the New Jersey Department of Health and Senior Services (NJDHSS) Office of Cancer Control and Prevention (OCCP) (www.state.nj.us/health/ccp/), the University of Medicine and Dentistry of New Jersey (UMDNJ) (www.umdj.edu/evalcweb/), and the Evaluation Committee of the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force Chair: Arnold Baskies, MD; Evaluation Committee Chair: Stanley H. Weiss, MD).

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Bergen County Cancer Capacity and Needs Assessment Report Summary

Introduction

The Office of Cancer Control and Prevention (OCCP) of the New Jersey Department of Health and Senior Services (NJDHSS), in conjunction with the mandate from the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force), is developing comprehensive capacity and needs assessment reports concerning cancer, individualized for each county in the state. This Report Summary highlights key findings in the Bergen County report.¹

The Task Force released New Jersey's Comprehensive Cancer Control Plan (NJ-CCCP) in 2002.² Each county was commissioned to develop a comprehensive capacity and needs assessment report, as part of the initial implementation steps for the NJ-CCCP. The full Report and this Report Summary were developed under the direction of the University of Medicine and Dentistry of New Jersey (UMDNJ) and the Evaluation Committee of the Task Force, in furtherance of the NJ-CCCP (which can be found at http://www.state.nj.us/health/ccp/ccc_plan.htm). This particular assessment was funded by the OCCP and conducted under the contract and direction of the New Jersey Cancer Education and Early Detection (NJCEED) program in Bergen County, administered by the Bergen County Department of Health Services.

The purpose of the capacity and needs assessment reports is to identify the major cancer issues affecting each county and the county's available resources, or lack thereof, for cancer prevention, screening, and treatment, and to propose recommendations for improvement. The Bergen County Report¹ analyzes the population demographics and the cancer incidence and mortality rates and distribution of stage at diagnosis for the seven priority cancers of the NJ-CCCP (breast, cervical, colorectal, lung, oral, melanoma, and prostate), as well as current resources available, in the county. These data guided the development of evidence-based recommendations and interventions to address cancer control priorities at local and state levels.

Section 1 – County Demographic Profile

Bergen County, located at the northeastern corner of New Jersey, is highly populated, educated, industrialized, and economically strong. As of the 2000 Census, Bergen County ranked first in population among all 21 counties, with a population of 884,118, and fourth in population density. Seniors (aged 65+) comprise 15% of the population, compared to 13% statewide.^a Bergen

^a In general, percentages in this report are rounded to two digits.

County has a high median age (39.1 years versus 36.7 in the state). The senior population in Bergen County (134,820) ranks first in the state, and almost 60% of this population is female.³ The population of Bergen County is predominantly white (78%), exceeding the statewide average (73%) by 5.8 percentage points. Nonetheless, Bergen County is becoming more diverse. The county has a burgeoning Asian population that increased by 72% from 1990 to 2000. Asians comprise 11% of the total Bergen County population, virtually double the proportion in the state (5.7%). The Hispanic population (91,377) experienced an increase of 84% from 1990 to 2000.^b The black population (46,568) comprises 5.3% of the county total. Approximately one-third of the population speaks a language other than English, with Spanish being the most common foreign language spoken at home.³

The median household income in Bergen County (\$65,241) exceeds that in the state (\$55,146) by 18%.^c Over one quarter of the households (29%) have an income over \$100,000. Despite these strong economic indicators, there are pockets of poverty in the county; 43,417 individuals (5% of the population) are below the federal poverty level. Five communities (Cliffside Park, Englewood, Fort Lee, Garfield and Hackensack) have over 2,000 individuals below the poverty level.³

In terms of educational attainment,^d Bergen County ranks seventh in New Jersey.³ Although higher than the statewide average, it is important to note that 13% (83,620) of the population 25 years and older did not complete high school.³

Section 2 – Overview of Overarching Issues

This section includes a review of available resources in Bergen County for cancer prevention, education, support, and treatment. Detailed information regarding cancer screening, education, advocacy, treatment, palliation, and other activities was collected in 2003–2004 to identify resources currently available in Bergen County, with some 156 agencies participating in the survey. This information was included in the statewide Cancer Resource Database of New Jersey (CRDNJ).⁷

This section also identifies areas where enhanced efforts for new initiatives are required.

Education and Prevention

Leadership in cancer early detection and education comes from New Jersey Cancer Education and Early Detection (NJCEED), whose program in Bergen County is structured as a single point of entry system into Bergen County's Department of Health (BCDOH). The American Cancer Society (ACS), the six hospitals in Bergen County, and community agencies are all involved in education and prevention efforts as well. Some faith-based organizations have participated in successful parish nursing and cancer screening programs. Although a number of major

^b Hispanics and non-Hispanics may be of any race. Racial categories include both Hispanics and non-Hispanics.

^c All figures for poverty, income, and employment are from the 2000 Census, but refer to the year 1999.

^d Educational attainment is defined by the percentage of adults aged 25+ with a high school diploma (or higher).

employers have curtailed wellness programs due to budget constraints, they are interested in cooperating in wellness programs with the area hospitals.^{5, 6}

The Bergen County Partnership for Community Health, parent organization to the present Bergen County NJCEED (BCNJCEED) Coalition, supports collaboration among various community organizations. Although targeting general health and well-being, the Partnership also supports cancer prevention through BCNJCEED Coalition-sponsored programs that teach behavior modification, increased physical activity, and improved nutrition. Overall, awareness of and participation in education and prevention programs should increase.

Comprehensive School Education

Education about cancer and cancer prevention is included in most schools through curricula that teach about smoking risks, excessive sun exposure, sexually transmitted diseases, and the benefit of good nutrition.⁷ Forty-eight schools responded to the CRDNJ questionnaire. Of these, 43 (90%) teach tobacco and alcohol issues, leading risk factors for numerous cancers. However, only 22 schools (46%) teach about breast and testicular self-exams. According to a key informant, most schools do not teach cancer-related subjects in any great depth. Based on the data received from the schools, curricula should be reviewed for comprehensive and unilateral coverage of cancer-related issues.⁷

Palliation/Quality of Life/Survivorship

Palliation (i.e., treatment for a patient at the end stages of cancer) is provided by three area hospice programs and the six hospitals. Although palliative care resources are adequate and accessible in Bergen County, key informants indicate that the general population is not knowledgeable about the benefits offered. Support services are also available through the American Cancer Society (ACS) and other non-profit organizations, family support groups, and bereavement support groups.⁷

Providers and Treatment

Bergen County offers a full continuum of cancer services, with no major gaps apparent from the inventory undertaken for this study. The county has an abundance of first-class health care facilities and excellent cancer prevention and education programs that are available through BCNJCEED, ACS, and community organizations.

The six hospitals in Bergen County responding to the CRDNJ – Bergen Regional Medical Center, Englewood Hospital and Medical Center, Hackensack University Medical Center, Holy Name Hospital, Pascack Valley Hospital, and The Valley Hospital – stated that they provide diagnostic and treatment services for cancer. These facilities, located within a 10-mile radius of each other, provide state-of-the-art technology, board-certified physicians, experienced nursing staff and health practitioners, and a patient-friendly atmosphere. The bed capacity allows for timely admissions. All hospitals indicated admissions are accepted and processed according to need. In addition, there are 19 freestanding radiology and diagnostic centers that provide mammography and diagnostic test services.^{2,7}

One notable resource is the American Cancer Society (ACS), a nationwide, community-based voluntary health organization dedicated to helping everyone who faces cancer through research, patient services, early detection, treatment, and education. The ACS maintains a web site and a national call center^c (1-800-ACS-2345 ext. 1).⁴⁵ Patients and others can obtain referrals to local cancer resources as well as to a local “patient and family services director/coordinator” who may be able to serve as a “patient navigator.”

Access to Care

Despite Bergen County’s excellent treatment resources and prevention and education programs, key informants expressed concern that minority and low-income residents have inadequate access to care. In Bergen County in 2002, 12% of the population (112,268) did not have health insurance.⁸ It seems likely that the uninsured or underinsured populations often choose not to access health care because they simply cannot afford the expense.

Cultural norms act as a barrier to care among many minority populations. Cultural taboos about disease, a reluctance to confront health care issues, and a perceived lack of trust interfere with effectiveness in reaching minority populations. Language barriers and lower socioeconomic status more common with minority groups hinder participation in screening programs. Across all cultures, males access preventive healthcare less often than females. This has been evident in prostate screening programs where outreach has been difficult. Key informants from BCNJCEED recognized these cultural barriers when they partnered with Harry Carson, former NFL football player, and Reverend Gregory Jackson to successfully increase prostate screening in a collaborative program “Let’s Tackle Prostate Cancer Together.” These two respected individuals were role models for their own culture and demonstrated the importance of prostate screening by being tested themselves and giving motivational speeches to alleviate fears of testing.^(1,2,5,8,9,10)

Transportation

Transportation is identified as an important support service needed for effective cancer education, prevention, treatment, and support.^{1,2,5,6,10,11,12} Qualitative evidence suggests the existence of a transportation problem in Bergen County. A representative from the Bergen County Planning Department states “it is easy to travel to New York City but it can be very difficult to get from point A to point B within the county on mass transit.”¹³ Only 11% of the Bergen County population uses public transportation to get to work.³ Currently, improvements to the mass transit system within the county have been identified and are in the Master Plan for the Bergen County Planning Department.¹³

According to key informants, transportation to screening sites is a major problem for the portion of the county population that does not have an automobile or access to private transportation. BCNJCEED and coalition members revealed that low-income individuals and the elderly do not

^c The national call center takes 1.2 million calls per year. See http://www.cancer.org/docroot/ESN/content/ESN_3_1X_ACS_National_Cancer_Information_Center.asp?sitearea=ESN (accessed 9/22/2004).

always drive and must depend on public transportation or volunteers for transportation. The BCNJCEED Coordinator stated that an analysis of missed appointments revealed a need for transportation and that a program to pay for taxi transportation was implemented. The ACS publishes a list of free transportation within the county, but these services do not cover many times and days of the week.¹² (The ACS does, however, offer volunteer-based transportation services to cancer patients any time these are needed.)

During interviews for the CRDNJ, key informants at area hospitals revealed that, although bus service may stop at or near the hospital, a walk of one to four blocks may be necessary.⁷ Lack of centralized, efficient public transportation forces vulnerable populations to rely on community resources to meet transportation needs. The private sector is often overwhelmed and unable to keep pace with demand. Therefore, strategies are needed to improve transportation to increase access to cancer care in Bergen County.^{1,2,5,13}

Advocacy

Organizations such as the ACS, the Susan G. Komen Foundation, and BCNJCEED Coalition members are major cancer advocates in Bergen County. Advocacy efforts by such organizations have led to cancer-related policy development and legislation that will benefit people statewide and nationally. Bergen County legislators have been active as sponsors or co-sponsors of pieces of legislation designed to assist in the fight to conquer cancer.¹⁴

Nutrition and Physical Activity

The Bergen County Partnership for Community Health contracted with the Eagleton Institute's Center for Public Interest Polling at Rutgers University to conduct a telephone survey of a stratified random probability sample of 1,019 adults in February 2000. This showed 39% of adults are more than 15 pounds overweight as defined by the revised 1992 Met Life height-weight chart.^{15,16} More significantly, the survey revealed that one in five adults (22%) are obese (30+ pounds overweight). Obesity is a major cancer risk factor.¹⁷ To compound the overweight problem, the survey revealed that 25% of Bergen County residents never exercise, and 29% exercise only minimally. An ACS survey conducted in 2002 found that only 1% of Americans understand that maintaining a healthy weight is a way to reduce cancer risks.^{50,12} The percentage of county residents who eat an appropriate diet and participate in regular exercise needs to increase.

Childhood Cancer Care

Pediatric cancer care in Bergen County is excellent. The county is fortunate to have the Tomorrow's Children's Institute (TCI) at the Hackensack University Medical Center (HUMC), a major teaching and research affiliate of the University of Medicine and Dentistry of New Jersey. One can reasonably conclude that the resources available at TCI are more than adequate to service the needs of the county. The incidence of childhood cancer for Bergen County (13.9 per 100,000) was comparable to the statewide rate (14.3 per 100,000) during 1979–1995 and the

average annual number of cases was 22.^{f,1,2,18,19,20,21,22} TCI has 22 dedicated inpatient beds for children with cancer. According to a hospital key informant, TCI has sufficient capacity to service the patient demand in Bergen County. TCI provides comprehensive inpatient and outpatient oncology and hematology services for children of all ages. They also provide for the psychosocial needs of the patient's family and friends. The other five area hospitals do provide some services for childhood cancer, but generally use the services of HUMC or nearby metropolitan hospitals. According to CRDNJ responses, Bergen County hospitals offer support services, home care and support groups for pediatric cancer patients.^{2,7,18,19,20}

Section 3 – Cancer Burden

All incidence²³ and mortality²⁷ rates cited are per 100,000 population and age-adjusted to the 2000 U.S. population standard³. All county and state rates are average annual rates during 1996–2000. For simplicity, the 1996–2000 average annual age-adjusted incidence or mortality rate hereinafter will be abbreviated and referred to as incidence or mortality rate, respectively. The reason the five-year average has been routinely used is that the small number of cases in a single year leads to statistical variations that are not generally meaningful. For U.S. incidence rates, 1999 or 2000 rates were used. Unless otherwise specified, all rates are for invasive cancer only.

Overall Cancer Burden in Bergen County

As the most populous county in New Jersey, Bergen County not surprisingly bears the greatest cancer burden in the state in absolute numbers. The total number of newly diagnosed cases (incidence) of all cancers in Bergen County, 26,639 from 1996 to 2000, was greatest among all 21 counties for all cancers combined and constituted 12% of the 223,156 new cases in the state. Cancer is the second leading cause of death in Bergen County, as it is in the state. Future cancer statistics in Bergen County will likely be fueled by increases among the senior population, as evidenced by a high median age (39) and a growing population of persons aged 65+. As the highest incidence in most cancer sites occurs in the 65+ population, it is imperative that interventions be put in place now to address future population dynamics.^{1,2,3,23}

Incidence. The county incidence rate for all cancers combined among white males (644.0) was higher than that in the state (625.2), while for black males it was lower (656.9 in the county, 716.5 in the state). Incidence rates among white and black females in the county (469.6 and 404.5, respectively) were similar to those in the state (464.9 and 414.2 for white and black females, respectively). Hispanic males and females in Bergen County had incidence rates for all cancers combined (642.5 and 399.5, respectively) notably higher than in the state (539.1 and 363.8 for Hispanic males and females, respectively).^{g,h}

^f Note that these rates, unlike all others in this report, are age-adjusted to the 1970 U.S. population standard. (Note that reference 21 is the relevant one here.)

^g Hispanics and non-Hispanics may be of any race. Racial categories include both Hispanics and non-Hispanics. Some tables include summaries for white and black race and for Hispanic ethnicity. Data on non-Hispanics is not available. Comparisons of Hispanic rates with rates for the whole population may underestimate the difference between Hispanics and non-Hispanics because Hispanics are included in the total population.

Among the seven NJ-CCCP priority cancers, county incidence rates were at least 10% higher than the corresponding state rates only for melanoma in both males and females, while the county mortality rate was at least 10% higher than the state rate only for melanoma in females. County incidence and mortality rates were both at least 10% lower than state rates for cervical cancer, lung cancer in males, and oral and oropharyngeal cancer in males, while the county mortality rate was at least 10% lower than the state rate for colorectal cancer in males.

Table 1. Cancer Incidence Rates, Counts and County Rank, All Cancers Combined, by Race, Ethnicity, and Sex, New Jersey and Bergen County, 1996–2000

Race	Sex		Avg. Annual Rate	Total 5-Yr. Count
All Races	Male	New Jersey	628.7	113,946
		Bergen	633.3	13,721
	Female	New Jersey	453.7	109,210
		Bergen	456.8	12,918
White	Male	New Jersey	625.2	98,528
		Bergen	644.0	12,681
	Female	New Jersey	464.9	95,598
		Bergen	469.6	11,885
Black	Male	New Jersey	716.5	12,613
		Bergen	656.9	546
	Female	New Jersey	414.2	10,820
		Bergen	404.5	506
Hispanic	Male	New Jersey	539.1	6,046
		Bergen	642.5	576
	Female	New Jersey	363.8	6,056
		Bergen	399.5	603
Rates are average annual rates per 100,000, age-adjusted to the 2000 U.S. (19 age groups) population standard, for the period 1996–2000. Counts are total counts for the same five-year period (and hence should be divided by 5 to obtain average annual counts.) Hispanics may be of any race; therefore, the categories of race and ethnicity are not mutually exclusive. Source: New Jersey State Cancer Registry, New Jersey Department of Health and Senior Services, August 2003				

^h Other minority groups raise special issues as well, related to culture, language, and access to care. Although there are concerns that minorities bear disproportionate portions of the cancer burden, their limited numbers lead to their omission from many sources of statistical data. Thus, precise numbers and rates are not readily available and are not portrayed explicitly.

Mortality. In the United States, 563,700 deaths from cancer are expected in 2004. In 2003, approximately 22,100 Hispanics and 63,100 blacks died from cancer.⁴⁶ Table 2 compares mortality rates for all cancers combined from 1996 through 2000 in Bergen County, New Jersey, and the United States. The mortality rate in Bergen County was lower than that in New Jersey for all age cohorts, male and female. However, Bergen County rates were higher than national rates for males aged 50+ and both genders aged 65+.

Table 2. Cancer Mortality Rates, All Cancers Combined, by Sex, Bergen County, New Jersey and United States 1996–2000

Gender	Age	Bergen		New Jersey		United States	
		Rate	Count	Rate	Count	Rate	Count
Male	Total	241.2	5,004	261.1	45,084	270.2	1,412,821
	0-49	17.6	279	20.8	3,099	27.4	98,118
	50+	826.7	4,725	890.3	41,985	796.4	1,314,703
	0-64	60.7	1,207	71.7	12,440	90.4	408,815
	65+	1,489.0	3,797	1,570.0	32,644	1,416.3	1,004,006
Female	Total	173.2	5,242	181.6	45,671	233.6	1,303,251
	0-49	20.5	344	22.5	3,485	30.5	108,370
	50+	573.1	4,898	598.1	42,186	588.8	1,194,881
	0-64	58.9	1,277	66.0	12,389	82.2	374,571
	65+	963.3	3,965	981.0	33,282	909.9	928,680
Rates are annual per 100,000 and age-adjusted to the 2000 U.S. (19 age groups) standard. Counts are totals over the whole five-year period. Source: Underlying mortality data provided by NCHS (www.cdc.gov/nchs). October 1, 2004.							

Cancer Burden by Site in Bergen County

Table 3 (on the following page) summarizes Bergen County prevalence, incidence, and mortality rates for the seven priority cancers of the NJ-CCCP. All statistics cited in this report are for the years 1996 through 2000. Cancers for which county incidence rates are at least 10% higher than state rates include: melanoma (male and female). Cancers for which county mortality rates are at least 10% higher than state rates include: melanoma (female).

Table 3.
Summary of Selected^a Age-Adjusted^b Bergen County Cancer Statistics, 1996–2000^c

	Estimated Prevalence^d	Incidence per 100,000^e	Mortality per 100,000^e
All Cancers,^f Bergen County			
Male	15,266	633.3	241.2
Female	22,793	456.8	173.2
NJ-CCCP Priority Cancer by Gender			
Breast, female	9,146	146.6	30.1
Cervical, female	767	8.8	1.9
Colorectal, male	1,759	76.5	26.3
Colorectal, female	2,588	54.9	19.2
Lung, male	499	80.7	65.5
Lung, female	654	50.5	37.8
Melanoma, male	1,044	23.3	4.6
Melanoma, female	1,235	14.1	2.1
Oral/Oropharyngeal, male	355	12.2	3.3
Oral/Oropharyngeal, female	292	5.9	1.5
Prostate, male	6,750	208.7	30.2

^a Based upon the NJ-CCCP.

^b Age-adjusted to 2000 U.S. Census population standards. Age-adjustment is used to describe rates in which statistical procedures have been applied to remove the effect of differences in composition (specifically, variations in age distribution) of the various populations. This is important in order to portray an accurate picture of the burden of cancer, since cancer is known to disproportionately affect persons of differing ages.

^c Rates are average annual rates during the time period 1996 through 2000.

^d Prevalence is the measurement of burden of disease in the population at a particular point in time. Within this report, it represents the number of people alive who have ever been diagnosed with the disease. Prevalence figures given here are rough theoretical estimates, based on a number of assumptions, and computed by applying national prevalence-to-incidence ratios to Bergen County's average annual crude incidence counts for the five years 1996–2000, separately for each gender. Actual prevalence is likely to be of the same order of magnitude as the estimate.⁴⁶

^e Incidence and mortality are gender-specific, age-adjusted annual rates, not counts. A rate at least 10% higher than the corresponding state rate is shown in bold italics.

^f "All cancers" represents the sum of all invasive cancer during the time period, not just the seven cancers discussed in detail below.

Breast Cancer

Prevalence and incidence. For the time period 1996 through 2000 inclusive, roughly 9,146 females in Bergen County were living with diagnosed breast cancer.^{2,3,23} Over the same time period, a total of 4,001 women were diagnosed with invasive¹ breast cancer. This is the total incidence of new cases over the five-year period. Thus, the average incidence was 800 cases per year. The breast cancer incidence rate in Bergen County for all females from 1996–2000 (146.6) ranked fourth in the state, which had a rate of 138.5. Incidence rates increased with age, with the highest rate among those 75 and older (466.6 in Bergen County, 464.0 in the state) and the next

ⁱ *In situ* cancers are not included in this or other totals.

highest among those aged 65–74 (450.6 in the county, 441.7 in the state).^{2,23,25} White females accounted for 92% of new cases in Bergen County.^{2,23,24,25}

Mortality. Bergen County had an average of 175 deaths annually from breast cancer among females, which was 11% of the state average (1,533). The average female breast cancer mortality rate in Bergen County (30.1) was slightly lower than that of the state (31.3) but not as low as that of the nation (27.7).^{2,23} Neither Bergen County nor the state is meeting the *Healthy New Jersey 2010* target of 21.5, as recalculated using the 2000 U.S. population standard.²⁶ Mortality rates increased with age, with women 65 and over having a breast cancer mortality rate of 137.4 in Bergen; this rate was similar to that for the state (141.5). White females in Bergen County had an average death rate of 31.2, which was similar to that for the state (31.1). The mortality rate for black females in Bergen County (24.4) was notably lower than in the state (37.2) and also notably lower than for white females; these patterns contrast favorably with the statewide pattern of black women having lower breast cancer incidence rates but higher breast cancer mortality rates than white women.

Staging. The distribution by stage at diagnosis in Bergen County was similar to that of the state, with 68% of breast cancer cases in females in the county diagnosed at the *in situ* or localized stage compared to 66% in the state. This is lower than the *Healthy New Jersey 2010* preferred endpoint of 85%.^{26,28} The highest rate of distant stage diagnosis was among females 75 years and older (6.5% in Bergen County, 6.0% in the state).^{26,28} There was a disparity between black and white women; among those breast cancer diagnoses in 1996–2000 for which stage was recorded, 71% were at the *in situ* or localized stage in white women, while only 65% were at these early stages in black women.

Population of focus. The data suggest women 40 and over as the population of focus in Bergen County for breast cancer, with additional foci on women over 65 years of age and on black and Hispanic women. The highest incidence rate in Bergen County was for white women (151.8) – a rate that exceeded that of the state (143.4). Black and Hispanic women in Bergen County had incidence rates higher than those in the state but the actual number of breast cancer cases within these groups was relatively low.

The county has 232,874 (51% of total) women 40 years old and over. A concerted effort must be made to make this population aware that early detection is the key to survival from breast cancer. With 69% of the black population residing in Teaneck, Hackensack, and Englewood, it would be prudent to target these areas for early detection and education, given the disparity in stage at diagnosis. Emphasis should be placed on encouraging all women 40+ years of age in Bergen County to have annual mammographies. Evidence suggests particular attention be paid to women in the 65+ age group (80,094) and adult women with incomes below 250% of the federal poverty level (20,378).^{1,2,3,10}

The National Cancer Institute’s Atlantic Region Cancer Information Service has identified clusters within Bergen County that may be in need of breast cancer screening, including zip codes 07430, 07026, 07601, 07607, 07604, 07071, 07010, 07657, 07024, 07605, 07631, 07071,

07072, 07606, 07603 and 07621.^j The maps and findings from this work may assist Bergen County in targeting specific areas.^{2,10}

Causes and solutions. The best defense against breast cancer is early detection, which is documented to increase the likelihood of remission, thus saving lives. Screening by mammography is a vital tool for breast cancer survival. According to the ACS, mammography can detect breast cancer in its more treatable stage on average one to three years before a lump can be felt. Women over the age of 40 should be screened every one to two years. Mammography can detect non-cancerous lesions as well as *in situ* and invasive breast cancers that are smaller than those detected by other means.^{11,29} *Healthy New Jersey 2010* has set a goal to increase the percentage of women over 40 who receive a clinical breast exam and mammogram at least every two years. Among 3,923 New Jersey women aged 50 and over who were interviewed from 2000 through 2002, 78% reported having had a mammogram within the past two years.^(8,48) Based on interviews of 597 women in Bergen County, the county rate did not differ significantly from the state rate.⁴⁸ As there are 158,780 women aged 50 and over in the county, the BRFSS data suggest at least 61,924 mammograms per year were conducted in this age group alone, but an estimated 34,932 women aged 50 and over did not receive a mammogram in the past two years. There are limitations to these data.^k Thus, it is not possible to assess whether the total capacity available is adequate to meet the total need for breast cancer screening. Within Bergen County, screening rates increased significantly during the period 1992–2002, as they did in the state overall.⁵¹ The 2000 Bergen Health Status Report,¹⁵ shows that women aged 65–74 are the population segment having the lowest percentage of women who had a clinical exam; this pattern is similar to behavior observed statewide.

Cervical Cancer

Prevalence and incidence. For the time period 1996 through 2000 inclusive, roughly 767 females in Bergen County were living with diagnosed cervical cancer.^{2,3,23} Over the same five-year period, a total of 226 new cervical cancer cases were diagnosed. Thus, the average annual incidence was 45 cases per year. The average annual cervical cancer incidence rate among women, 1996–2000, was lower in Bergen County (8.8 per 100,000) than in the state (10.9).^{2,23} Nevertheless, even Bergen County was not meeting the *Healthy New Jersey 2010* target incidence rate of 6.8 (as recalculated using the 2000 U.S. population standard), not to mention

^j Consumer Health Profile maps of each New Jersey county were provided in June 2003 to the NJDHSS and UMDNJ and each county by the National Cancer Institute's Atlantic Region Cancer Information Service, along with ongoing technical support. (More information can be obtained from: 1-800-4-CANCER.) The term *medically underserved* refers to individuals who lack access to primary care either because they are socioeconomically disadvantaged and may or may not live in areas with high poverty rates or because they reside in rural areas. The term also refers to individuals that reside in geographic areas where the Index of Medical Underservice (IMU) is 62 or less. The IMU is a weighted score derived from four variables: the ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of population below the federal poverty level, and the percentage of the population aged 65 years and older. The data categorize the U.S. population into 62 groups based upon characteristics such as geography, demographics, lifestyle, and socioeconomic status. Within these 62 groups, 30 are classified as medically underserved.¹⁰

^k Limitations include the following: (1) the 40–49 age group has not yet been surveyed for this issue; and (2) the proportion of women who had mammograms more than once within a two-year period is not known; therefore, the utilization of 61,924 mammograms is conservative.

the preferred endpoint of 2.5 (as likewise recalculated).^{26,28} The county incidence rates for white and black females (9.2 and 6.3, respectively) were lower than the state rates (10.1 and 17.9 for white and black females, respectively), with blacks having met the *Healthy New Jersey 2010* target. Bergen County Hispanic females have the highest rate (16.1) among racial and ethnic groups for which statistics are available, similar to their rate statewide (15.8). However, the counts for black and Hispanic women are small, and continued monitoring is needed.^{2,11,23}

Mortality. From 1996–2000 Bergen County had 51 deaths reported from cervical cancer, with a mortality rate of 1.9, lower than that of the state (3.1). Neither Bergen County nor the state are meeting the *Healthy New Jersey 2010* target of 1.5, as recalculated using the 2000 U.S. population standard.^{26,28} As in the state, mortality rates were highest among older women, at 4.8 for women aged 50 and over and 4.6 for women aged 65 and over, although these rates are lower than the corresponding statewide rates (7.5 and 8.4, respectively).^{2,24,26,30}

Staging. The distribution by stage at diagnosis in Bergen County is similar to that of the state. During the period 1996–2000, 45% of cervical cancers in Bergen County were diagnosed in the localized stage, compared with 47% in the state (47%), and 43% of the cases were diagnosed at the regional /distant stage, compared with 39% in the state.^{2,23} There were too few cases among black or Hispanic women in Bergen County to ascertain the presence or absence of disparities affecting either of these groups.

Population of focus. The ethnic/cultural group known to be at highest risk in Bergen County is Hispanic females. The incidence rate for cervical cancer among Hispanic females in Bergen County is higher than among any other racial/ethnic group for which data are available. A large group that has been little studied in Bergen County is Asians. Bergen County has the second largest Asian population in the state (94,329), and there has been a steady increase in the Asian population according to a key informant at the Partnership for Community Health.^{2,6} BCNJCEED said only limited screening has been done for eligible Hispanic and Asian females over 40 years of age.^{2,5,6,31}

Causes and solutions. Early detection of cervical cancer can easily prevent mortality. Papanicolaou (“Pap”) tests detect some precancerous as well as cancerous lesions. Some health insurance companies have moved to cover a more sensitive and specific screening test, the AutoPap, which uses a thin preparation of cells along with computer-assisted technology.¹ Pap smear screening is vital to detecting cervical cancer. Among 7,689 New Jersey women with no history of hysterectomy who were interviewed from 2000 through 2002, 83% reported having had a Pap smear within the past three years.^{8,48} Based on interviews of 1,076 women in Bergen County, the county rate did not differ significantly from the state rate.⁴⁸ Within Bergen County, screening rates increased significantly during the period 1992–2002, as they did in the state overall.^{48,8}

Human Papillomavirus (HPV), a sexually transmitted disease, is the most significant risk factor for developing cervical cancer; recommendations for the incorporation of HPV testing¹ as part of a pelvic examination have been developed by the American College of Obstetricians and

¹ For example, the ViraPap™ will detect which strains of HPV DNA, if any, are present.

Gynecologists.^{1,49} Risk factors for cervical cancer include ever being sexually active, lack of routine screening, early onset of sexual intercourse, a history of multiple partners, a history of sexually transmitted infections (especially HPV), obesity, and smoking.

Due to the increasing Asian and Hispanic populations in Bergen County, key informants stated that there is an increased need for materials to be developed and interpreters available to assist when there are language barriers.^{2,3,5,6,12} The ACS offers tailored programs that are culturally appropriate and language specific for ethnic and medically underserved audiences.^{11,12}

The ACS recommendations (available, e.g., in *Cancer Facts and Figures*¹¹, 2005 ed., p. 60) should be followed when educating women about the need for and performing Pap tests.^{11,12} The National Cancer Institute's Atlantic Region Cancer Information Service (see the section on breast cancer above) has identified clusters within Bergen County that may be in need of cervical cancer screening, including zip codes 07430, 07026, 07601, 07607, 07604, 07071, 07010, 07657, 07024, 07605, 07631, 07071, 07072, 07606, 07603 and 07621. The maps and findings from this work may assist Bergen County in targeting specific areas.^{2,10,11}

Colorectal Cancer

Prevalence and incidence. For the time period 1996 through 2000 inclusive, roughly 1,759 males and 2,588 females in Bergen County were living with diagnosed colorectal cancer.^{2,3,23} Over the same five-year period, a total of 1,616 men and 1,663 women were diagnosed with colorectal cancer. These figures represent the total incidence of new cases over the five-year period. Thus, the average annual incidence was 323 cases in men and 333 cases in women per year. The county's average annual incidence rate for males (76.5) was slightly lower than that of the state (79.0), and the rate for Bergen County females (54.9) was similar to that for the state (54.4). As the largest county, Bergen County had the highest number of new cases of colorectal cancer in 1996–2000 (an average of 656 per year).^{23,25} Among racial and ethnic groups for which data are available, the highest incidence rate was among white males (78.8). It is interesting to note that the incidence rate for black males in Bergen County (53.7) was a good deal lower than the rate for black males in the state (77.1). The county incidence rates for Hispanic males (70.7) and females (57.9) were higher than those of the state (61.8 and 46.8, respectively). Colorectal cancer incidence increases dramatically with age in both males and females, with males having consistently higher rates than females. The greatest burden for total new cases in Bergen County was in the 65+ age cohort with counts during the period 1996–2000 for males of 1,127 and females 1,272.

Mortality. From 1996 to 2000, 1,148 persons in Bergen County died from colorectal cancer, constituting 11% of the colorectal cancer deaths in the state. Mortality statistics for colorectal cancer indicate the rate has been falling in Bergen County for each gender since 1977²⁷, and county colorectal cancer mortality rates were lower than corresponding state rates for every population grouping for which data are available and for which there were at least three colorectal cancer deaths per year in Bergen County. In 1996 to 2000, the colorectal cancer mortality rate for all males in the county was 26.3, 11% lower than the state rate of 29.5; for females, the county rate (19.2) was much closer to the state rate (20.1). Among racial and ethnic groups for which data are available, the highest mortality rate was among white males (27.2).

However, the *Healthy New Jersey 2010* target for colorectal cancer mortality of 18.6 per 100,000, as recalculated using the 2000 U.S. population standard,^{26,28} has not been achieved in Bergen County. The Bergen County mortality rates for black males (23.6) and black females (21.7) were lower than those in the state (35.8 and 24.5, respectively), although counts are too low for these differences to achieve statistical significance.^{2,23,24}

Staging. The distribution by stage at diagnosis in Bergen County is similar to that of the state. Over one-half of the cases were diagnosed at the regional or distant stage for both males and females, as in the state.^{2,23} One notable disparity appears to be among black females in the county, for whom 72% of cases for which a stage at diagnosis is available were regional or distant, compared to 58% for white women; counts were too low for this to reach statistical significance at the 95% level, however.

Population of focus. Colorectal cancer is a disease that becomes more common with age. It is the third most common cancer for the over-50 age group. Therefore, the main focus for colorectal cancer prevention is targeting men and women, all races, 50 years and older. Men and women with incomes below 250% of the federal poverty level are an important subgroup because of access, cultural, economic, and language issues.^{1,2,3,8,10} Bergen County has 13,388 males and females aged 50+ years with incomes below 250% of federal poverty level, and BCNJCEED reports screening only 315 males and females (2.3% of the eligible population) between 2000–2003.^{3,5,8,10,11,31}

Bergen County has an aging population, with a median age of 39 and 134,820 residents aged 65 years or older. Over 50% of the total colorectal cancer cases, male and female, were diagnosed at the regional/distant stage. Therefore, the present pattern of late-stage diagnosis and concomitant mortality may worsen without interventions.

The National Cancer Institute's Atlantic Region Cancer Information Service (see the section on breast cancer above) has identified clusters within Bergen County that may be in need of colorectal cancer screening, including zip codes 07010, 07065, 07061, 07430, 07426, 07604, 07601, 07603, 07024, 07010, 07071, 07646, and 07055 (shared with Passaic). The maps and findings from this work may assist Bergen County in targeting specific areas.¹⁰

Causes and solutions. Since colorectal cancer is a disease that increases with age, screening efforts should be focused on all adults over 50. As noted earlier in the paper, one of the *Healthy New Jersey 2010* goals for colorectal cancer, as recalculated using the 2000 U.S. population standard, is to reduce the age-adjusted death rate to 13.0.^{26,28} Bergen County has not met this goal. Early detection is the most effective means of reducing the severity of colon cancer and increasing the likelihood of survival. The ACS recommendations for early detection of colorectal cancer should be the guide for BCNJCEED, physicians, nurse practitioners, and other providers when completing screenings and physicals.^{2,11,12}

Among 4,961 New Jersey adults aged 50 and over who were interviewed from 2001 through 2002, 56% reported having had colorectal cancer screening (either a fecal occult blood test within the past year or a sigmoidoscopy or colonoscopy ever).^{8,48} Based on interviews of 880 adults in Bergen County, the county rate did not differ significantly from the state rate.⁴⁸ As there

are 284,675 adults aged 50 and over in the county, the BRFSS data suggest that roughly 125,257 adults are in need of colorectal cancer screening. Within Bergen County, screening rates increased significantly during the period 1992–2002, as they did in the state overall. Access to care is a barrier for the segment of the population that is uninsured, underinsured, and low income.^{1,2,10} However, the Bergen County Health Survey 2000 determined that 87% of its residents have health care coverage,^{15,16} which is consonant with the statewide BRFSS estimate of 13% of the state's population lacking health insurance in 2002.⁸ Therefore, one can reasonably conclude that access is available to this segment of the population but that efforts must be made to educate and encourage these people to have colorectal screening.⁸

Proper diet and physical exercise must be emphasized as reasonable preventive measures that can be realized by all segments of the population. Key informants recommended that programs for education and intervention be located within the community so that access can be optimized and lack of transportation is not an issue. Secondly, BCNJCEED and all providers doing any type of screening should provide the client with the Fecal Occult Blood Test (FOBT) home screening kit.^{11,31} Education is a very important component to early detection. Programs and materials must be offered in the primary language spoken in the community, and key individuals within the community must be recruited to convey the importance of screening as a preventive measure for cancer.^{2,5,6,11,32}

Lung Cancer

Prevalence and incidence. For the time period 1996 through 2000 inclusive, roughly 499 males and 654 females in Bergen County were living with diagnosed lung cancer.^{2,3,23} Over the same five-year period, a total of 1,760 men and 1,492 women were diagnosed with lung cancer. These figures represent the total incidence of new cases over the five-year period. Thus, the average annual incidence was 352 cases in men and 298 cases in women per year. The average annual lung cancer incidence rates in Bergen County during 1996–2000 for males (80.7) and females (50.5) were notably lower than the corresponding state rates (92.5 and 55.4 for males and females, respectively).

Bergen County has the greatest burden in the state for new lung cancer cases (650 average annual). Males in Bergen County accounted for 54% of the total cases and females for 46%; these patterns were similar to the patterns observed statewide (55% and 45% for males and females, respectively). Among racial and ethnic groups for which data are available, black males had the highest overall rate (95.0) in Bergen County, but it was lower than that in the state (118.1).^{2,23,24} In Bergen County 72% of the total cases of lung cancer occurred in the 65+ population; this pattern is similar to the pattern for the state (68%).

Mortality. Bergen County deaths from lung cancer during 1996–2000 totaled 2,540, representing 11% of the state total. Bergen County lung cancer death rates for males (65.5) and females (37.8) were notably lower than those for the state (74.8 and 41.6 for males and females, respectively). The death rate for the county has been falling since 1977, as has that of the state since 1987.²⁴ Neither the state nor Bergen County met the *Healthy New Jersey 2010* target lung cancer mortality rate of 45.3, as recalculated using the 2000 U.S. population standard, although females in the county met both the target (40.5) and their preferred endpoint (39.7).^{26,28} Lung

cancer mortality increases with age. Among males 77%, and among females 76% of the lung cancer deaths in Bergen County occurred among persons 65 years of age and older. In New Jersey 72% of the lung cancer deaths in males and 73% of the lung cancer deaths in females occurred in the 65+ age cohort.^{23,24} Bergen County, however, met the *Healthy New Jersey 2010* target (as recalculated using the 2000 U.S. population standard) for all persons aged 65+ (294.7), with a mortality rate of 288.5 (males and females combined).²⁹

Population of focus. Black males should be a primary population of focus as they have the highest average lung cancer incidence rate (95.0). Since 69% of the black population resides in Teaneck, Hackensack, and Englewood, the residents of these areas should be an initial focus for education and should be encouraged to utilize smoking cessation programs.^{2,3}

With tobacco considered to be the leading cause of preventable death, it is imperative that Bergen County youth be educated about the perils of smoking.³³ The Bergen Survey showed that 40% of Bergen youth have smoked and that 20% are current users. In grades 11–12, 40% of the females and 30% of the males had smoked. This population must be reached now in order to counsel them on the hazards that smoking poses for their future health.^{15,16}

Causes and solutions. Due to the lack of effective screening methods to detect lung cancer at an early stage and the limited efficacy of treatment for advanced lung cancer, lung cancer survival is of shorter duration than for many other cancers. The increase in lung cancer incidence with age indicates that age is a relevant factor, with implications for the long-term effects of smoking on disease rates. Thus, the goal should be to reduce the occurrence of new lung cancer cases. Preventing young people from initiating smoking and providing effective smoking cessation programs for all ages, races, and socioeconomic levels should be major priorities for preventing lung cancer.

In 2000, 22% of New Jersey residents smoked, while 17% of Bergen County residents smoked.^{15,16} Bergen County did not meet the *Healthy New Jersey 2010* goal as recalculated using the 2000 U.S. population standard (39.7) for reducing the lung and bronchus cancer death rate. Since smoking is the highest risk factor for lung cancer, it is imperative that the county continue to strive to meet the *Healthy New Jersey 2010* goal.^{11,26,28}

In 2000, about 4.9 million smoking-related premature deaths occurred throughout the world.¹¹ With one out of every five deaths in the United States related to cigarette smoking, it is imperative that smoking prevention programs continue to be in the forefront of cancer prevention.¹¹ There were a minimum of 14 smoking cessation programs in Bergen County as of December 2003. Smoking assistance programs are critical to the support of cancer prevention, especially in high schools. Exposure to environmental tobacco smoke (ETS), or “second-hand” smoke, remains an additional important issue.¹

Melanoma

Prevalence and incidence. For the time period 1996 through 2000 inclusive, roughly 1,044 males and 1,235 females in Bergen County were living with diagnosed melanoma.^{2,3,23} Over the same five-year period, a total of 512 men and 378 women were diagnosed with melanoma of the

skin. These figures represent the total incidence of new cases over the five-year period. Thus, the average annual incidence of melanoma was 102 cases in men and 76 cases in women per year. The county incidence rates for males (23.3) and females (14.1) were each more than 10% higher than that in the state (20.1 and 11.9 for males and females, respectively). Bergen County had the highest burden in the state in absolute number of new cases (a total of 890 in the five-year period 1996–2000). White males (incidence rate 26.0) represented 99% of the 512 new male cases and white females (incidence rate 15.7) accounted for 97% of the 378 new cases.²⁶ Neither white males nor white females in Bergen County or the state are meeting the *Healthy New Jersey 2010* recalculated targets (12.4 and 7.7, respectively). The highest incidence rates of melanoma occurred among persons aged 75 and above for both males (90.0) and females (46.4).^{2,23}

Mortality. Bergen County had 164 deaths (100 males and 64 females) from melanoma in the period 1996–2000. The melanoma mortality rates for Bergen County males and females (4.6 and 2.1, respectively) are higher than those for the state (4.4 and 1.9 for males and females, respectively). Mortality rates increased with age, with 110 (60 males and 50 females) of the 164 deaths occurring among those aged 65 and over.^{23,24}

Staging. In Bergen County 1996–2000 1,319 of the new cases of melanoma were diagnosed at the *in situ* or localized stage, which constitutes 86% of all incident cases and 95% of all incident cases for which staging data were available.^{2,23} (The corresponding statewide percentages were slightly lower, 82% and 92%.)

Population of focus. With a large white population in Bergen County, white men and white women aged 50 and above are a focus for identifying early stages of melanoma skin cancer.^{1,2,3,5,11,12,31} The relatively high median income of Bergen County (\$65,241) would suggest that residents have disposable income to enjoy such recreation as the beach, lakes, swim clubs, and golf and tennis clubs. With these activities come the inherent dangers of exposure to the sun. Particular emphasis must be given to educating the youth, as they are very active in outdoor activities, and sun exposure early in life is a risk factor for development of melanoma later. Also, in Bergen County 28,834 people (6.6% of the county population) work in the construction or maintenance industry, with the vast majority of work being done outdoors. These people spend long hours in the sun and should be educated about the dangers of skin cancer and the need to limit exposure and use the appropriate sunscreen. Also, self-screening techniques should be taught to this population.^{2,3}

Causes and solutions. Risk factors contributing to melanoma have been documented. Exposure to solar ultraviolet radiation (UV light) is well established as a major risk factor for melanoma. Other risk factors include eye and skin coloring, geographic location, sunburn history and melanocytic nevi.¹² Intervention and education as to the hazards of the sun's rays and the use of sunscreens needs to begin in the early years of life. Parent and grandparent education and role modeling is very important as severe sunburn in childhood can greatly increase the risk of melanoma in later life. Children should be protected from the sun. The ACS has strongly advised limiting or avoiding exposure to the sun during midday hours (10AM-4PM). If one has to be outdoors, exposure to the sun should be limited by using sunscreen, broad rimmed hats, long sleeve shirts, and long pants. Sunglasses should be worn to protect the areas around the eyes.¹¹ A

key informant indicated that the schools need to make an added effort to educate youth about the hazards of the sun's rays and show them how to protect their skin.

Early detection is critical, and recognizing changes in skin growth or the appearance of new growths is the best way to detect skin cancer early. Self-examination should be done regularly. A simple **ABCD** rule outlines the warning signals of the most common type of melanoma: **A** is for asymmetry, i.e., one-half of the mole does not match the other half; **B** is for border irregularity, i.e., the edges are ragged, notched, or blurred; **C** is for color, i.e., the pigmentation is not uniform, with variable degrees of tan, brown, or black; **D** is for diameter greater than 6 millimeters. Any sudden or progressive increase in size should be of concern.¹¹

Oral and Oropharyngeal Cancer

Prevalence and incidence. For the time period 1996 through 2000 inclusive, roughly 355 males and 292 females in Bergen County were living with a diagnosis of oral and oropharyngeal cancer.^{2,3,23} Over the same time period, the total numbers of men and women diagnosed with oral and oropharyngeal cancer were 271 and 168, respectively. These figures represent the total incidence of new cases over the five-year period. Thus, the annual incidence was 54 cases in men and 34 cases in women per year. The oral and oropharyngeal incidence rate in Bergen County during 1996–2000 for males (12.2) compared favorably to that of the state (15.7), while for females the county and state rates (5.9 and 6.4, respectively) were closer. Bergen County had the highest burden in the state in absolute number of new cases (88, average annual). As in the state, black men and women had the highest oral and oropharyngeal cancer incidence rates in Bergen County (21.2 and 6.3, respectively), slightly lower than the state rates for black males (22.8) and black females (6.9).^{2,23,24} Oral cancer incidence rates increase with age.

Mortality. In the period 1996–2000, 72 males and 44 females died from this cancer.²³ Mortality increased with age, with 61% of male oral and oropharyngeal cancer deaths and 73% of female oral and oropharyngeal cancer deaths in Bergen County during 1996–2000 occurring among those aged 65 and older.

Staging. Oral and oropharyngeal cancer was diagnosed at the *in situ* or localized stage in only 33% of the cases in men and 49% of the cases in women for which staging data were available. The corresponding statewide percentages were similar – 35% and 48% for men and women, respectively – so this problem is not specific to Bergen County. Statewide, there was a racial disparity in stage of diagnosis among men; among cases for which staging data were available, 37% of cases in white males but only 26% of cases in black males were diagnosed at the *in situ* or localized stages. Bergen County data were consistent with the corresponding state data.^{2,23,27} These percentages of early stage diagnoses are comparable to those observed in colorectal or cervical cancer, despite the relative noninvasiveness of screening for oral cancer.^{26,28}

Population of focus. The entire population should receive education on the importance of dental care and regular dental visits. A key informant noted that good dental care begins during infancy. The primary burden for oral and oropharyngeal cancer lies with the male population over 50 years of age. Males have a much higher incidence of oral and oropharyngeal cancer than females. Therefore, all men and women over 50 years of age should be educated and screened by

a dentist. The minority populations, due to limited dental care,^{2,8,10} should be targeted for education and access to dental care and evaluation. Further, as black males experience the highest incidence and mortality rates, they must be considered a population of focus. The population with incomes below 250% of the federal poverty level also should be targeted for oral health care.^{1,2,3,8,10,11}

Causes and solutions. Risk factors for oral and oropharyngeal squamous cell carcinoma are long-term tobacco use, alcohol use, immunosuppression, use of betel nut quid (popular in the Asian population), and in the case of lip cancer, long-term sun exposure.^{2,11,34} Too much ultraviolet light can damage the cells on the lips and increase the risk of lip cancer.¹¹ In addition to the general health risks posed by tobacco, smokers have a greater risk of developing gum disease compared to non-smokers. Tobacco use in any form – cigarettes, pipes, and smokeless (spit) tobacco – increases the risk for gum disease, oral and throat cancers, and oral fungal infection (candidiasis).¹¹

Oral and oropharyngeal cancers are two to three times more common among males than females, and information about the associated risk factors bears this out.¹¹ Smokers are six times more likely than nonsmokers to develop oral or upper throat cancers. About 90% of people who develop these cancers use some form of tobacco. Those who use smokeless tobacco are at high risk for cancers of the cheek and inner surface of the lips.^{11,33} The public must be made aware and educated on the risk that smoking poses for oral and oropharyngeal cancer, and the fact that early detection can increase the ability to manage oral cancer through effective treatments in early stages.^{1,2,11,33}

Alcohol consumption is an independent risk factor, and when alcohol is combined with the use of tobacco products, 90% of all oral cancers are explained. About 75% of people with oral and upper throat cancers are frequent drinkers of alcohol. The combination of alcohol and tobacco use adds to the risk.¹¹ The 2002 SMART BRFSS survey results revealed that 13% of the Bergen County population is at risk due to binge drinking.⁸

Smoking is identified as a high-risk behavior for oral and oropharyngeal cancer. Nationally, tobacco is considered the leading cause of preventable death, accounting for 19% of preventable deaths from heart disease, cancers, respiratory disease, and infant deaths. A BRFSS survey revealed that 16% of the Bergen County population is at risk for smoking-related illnesses, including oral cancer, due to the fact they smoke cigarettes.^{8,33} Among Bergen youth surveyed in the 2000 Bergen County Adult Survey, 40% experienced smoking and 20% are current users. Similar to national trends, the youth survey revealed that girls in grades 11–12 (40%) are more likely than their male classmates (30%) to smoke.^{15,16}

According to the National Cancer Institute, New Jersey did not meet the *Healthy People 2010* goal to decrease smoking to a rate of 12% of the population. The New Jersey rate, overall, both sexes, is 21.1%, with males at a rate of 21.6% and females at 20.7%.^{26,28} Bergen County, like the state, did not meet the *Healthy People 2010* goal.^{26,28}

An examination of the CRDNJ data, coupled with information from key informants, makes it clear that oral and oropharyngeal cancers are mostly influenced by risk behaviors that can be

modified by education. Since a majority of residents are already visiting dentists, an opportunity exists to increase the number of routine oral cancer examinations in this setting.^{1,2,7,11} According to the 2002 BRFSS, 82% of Bergen County residents visited a dentist or dental clinic in 2002.⁸ No differences were observed for gender or age, and dental visits were positively associated with education and income level. When these data were analyzed by race, a disparity in dental care in New Jersey became evident. During a survey in Bergen County, 24% of whites, 30% of blacks, 41% of Hispanics, and 35% of ‘others’ answered ‘no’ to the question, “Have you had a dental visit within the past year?”^{1,2,8,11} The involvement of all dentists and hygienists can be enhanced by increasing the current level of awareness, training, and education among providers of healthcare and encouraging them to serve on coalition boards. The need for dental care should be highlighted in school health and cancer prevention programs.

Prostate Cancer

Prevalence and incidence. For the time period 1996 through 2000 inclusive, roughly 6,750 males in Bergen County were living with diagnosed prostate cancer.^{2,3,23} Over the same time period, the total number of men diagnosed with prostate cancer was 4,610. This is the total incidence of new cases over the five-year period. Thus, the annual incidence was 922 cases per year. Bergen County’s prostate cancer incidence rate was 208.7 – higher than the state rate (194.3). Bergen County had the highest burden in the state in absolute number of new cases per year (922, average annual).^{2,23,24} White males in Bergen County had a prostate cancer incidence rate of 209.1, more than 12% higher than the incidence rate among white males statewide (186.4). Black and Hispanic incidence rates in Bergen County (302.4 and 219.2, respectively) were also higher than in the state as a whole (282.9 and 189.3 for black and Hispanic males, respectively). Incidence increases with age: prostate cancer incidence rates for Bergen County were 366.0 in those aged 50–64, 1,226.0 in those aged 65–74, and 1,146.4 in those aged 75 and above. This pattern is similar to that observed in the state, with somewhat higher rates occurring in Bergen County.^{2,23,26,44}

Mortality. Bergen County has the highest burden in the state for actual number of deaths from prostate cancer (115 average annual). Black males in Bergen County had the highest death rate (58.9); almost double the rate for white males (29.5). This disparity also existed in the state where the mortality rate among black males was 68.8 and the rate among white males was 30.3. Neither the state nor Bergen County are meeting the recalculated *Healthy New Jersey 2010* targets to reduce the mortality rate for prostate cancer for all males (24.7), white males (25.7), and black males (56.1).^{26,28}

Staging. In Bergen County during the period 1996–2000, 87% of all new cases of prostate tumors for which a stage at diagnosis was recorded were diagnosed at the *in situ* or localized stage, similar to the corresponding percentage for the state (86%). Among black males in Bergen County, only 83% of the staged cases were diagnosed *in situ* or localized, similar to the 82% statewide, while the corresponding percentages for white males were 88% in the county and 87% in the state.²³

Population of focus. Prostate specific antigen (PSA) tests and/or digital rectal examinations (DREs) are recommended for all males aged 50 and above,¹¹ so the 125,587 males in Bergen

County who are 50+ should be a population of focus. Incidence counts are greatest (70% of all cases) in men over age 65, so this Bergen County population of 54,726 needs particular attention.^{2,3,23,24}

Black males in Bergen County have a prostate cancer incidence rate of 302.4 for 1996–2000, a rate which is significantly higher than the rate for the white population (209.1). There are 46,568 blacks in Bergen County with 32,031 residing in Teaneck, Hackensack, and Englewood.^{2,3,23} These areas should be targeted for education and screenings.

Information provided by BCNJCEED and other key informants makes it clear that blacks in Bergen County tend to resist prostate cancer screening.^{5,6,9} Since education about the benefits of early detection is essential, outreach efforts like the “Let’s Tackle Prostate Cancer Together” program need to be expanded.⁹

NJCEED prostate screening reported by Bergen County totaled 432 for the period 2000–2003. There is a need to increase NJCEED screening for the population below the federal poverty level.^{5,31} There are 4,207 males over 50 years of age in Bergen County who are below the federal poverty level.^{2,3,5}

The National Cancer Institute’s Atlantic Region Cancer Information Service (see the section on breast cancer above) has identified clusters within Bergen County that may be in need of prostate screening, including zip codes 07430, 07026, 07601, 07631, 07024, 07010, and 07621. The maps from this work may assist Bergen County in targeting specific areas.¹⁰

Causes and solutions. The three major risk factors that predispose men to prostate cancer are older age, being black, and having a genetic history of prostate cancer (a history of having an affected first-degree relative at least doubles the risk). PSAs and DREs are the screening tests used to diagnose this disease. BCNJCEED has been successful using celebrities like Harry Carson, former NFL star, and Johnny Sample, former New York Yankee, to enhance attendance at prostate education and screening seminars. The campaign, “Let’s Tackle Prostate Cancer Together,” a partnership between BCNJCEED, Reverend Gregory Jackson (pastor of Mount Olive Baptist Church), and former National Football League star Harry Carson resulted in a 106% (104/214 2002–2003) increase in screenings.^{2,5,9,31} According to BCNJCEED staff, Harry Carson and Reverend Gregory Jackson served as role models by participating in the screening test. Their involvement helped to change a cultural attitude (fear of loss of masculinity) toward digital rectal exams and prostate cancer.^{2,5,10} Continuing this type of activity will help break down the myth that there are negative aspects to prostate cancer screening.^{2,9}

Bladder Cancer

Bladder cancer is not one of the seven priority cancers identified by the NJ-CCCP but is discussed in this report. Note that incidence data presented here for bladder cancer are for 1997–2001, although mortality data, as in the rest of this report, are for 1996–2000.^{2,23,24,25}

Incidence. New Jersey bladder cancer incidence rates^m are higher than those of the nation for all race and ethnic categories.⁴⁷ The incidence rates for bladder cancer in Bergen County among males and females (48.5 and 12.3 per 100,000, respectively) tended to resemble the statewide picture (46.1 and 12.0 for males and females, respectively).^{23,24,25} Bergen County had the highest burden in the state for actual number of incident bladder cancer diagnoses per year: 208 among males and 74 among females^{23,24,25,26,27}

Mortality. Mortality due to bladder cancer is higher in New Jersey than the nation overall. The American Cancer Society estimated that bladder cancer in 2003 would be the sixth most common cause of cancer mortality in the U.S. and the fifth most common in New Jersey.¹¹ During 1996–2000, there were an average of 57 deaths annually from bladder cancer in Bergen County, over two-thirds of which (39 per year) were among males, a pattern similar to that in the state (447 deaths per year, of which 300 were among males). The gender difference in age-adjusted mortality rates was even more striking, with Bergen County mortality rates of 10.0 and 2.7 for men and women, respectively, similar again to state mortality rates of 9.4 and 2.7. Among males, whites have higher mortality rates than blacks, with statewide mortality rates of 9.7 and 6.9 for white and black males, respectively; similar figures were observed for Bergen County (where the death rates among white males and black males were 10.4 and 7.3, respectively, although the latter number was based on only 5 cases over the five-year period).²³ There does not appear to be such a large disparity among females, with state rates of 2.7 for whites and 3.2 among blacks (not a statistically significant difference). Hispanics appear to have low bladder cancer mortality rates – 4.7 for men and 1.6 for women statewide. The mortality rate due to bladder cancer increased with age in males and females in both the state and Bergen County, with the overwhelming majority of deaths occurring in those aged 65 and above (in Bergen County, 164 out of the 196 deaths in men and 82 out of the 89 deaths in women) and bladder cancer death rates of 67.9 for males and 19.4 for females in Bergen County.^(2,23,24,25)

Staging. Specific county and state data for bladder cancer staging are not available.^{35,36}

Population of focus. The population of focus for bladder cancer in Bergen County should be males and females aged 50+ of all races since the mortality rate begins to increase significantly at age 50 and is highest in the 65+ age cohort. Early detection, education, and support of signs and symptoms are necessary for the 125,587 males and 158,798 females above age 50 in Bergen County. Specific attention should be given to smokers since smoking is a major risk factor for bladder cancer.^{2,10,33}

Causes and solutions. There are many established risk factors associated with bladder cancer. Smoking is the greatest risk factor. Smokers tend to develop bladder cancer at two to three times the rate of nonsmokers. Smoking is estimated to cause 47% of bladder cancer deaths among men, and 37% among women. Second, certain occupations have been linked to increased risk for bladder cancer. Industries such as roofing, rubber manufacturing, textiles, paint, printing, hair dressing, and machining, expose workers to a class of chemicals called aromatic amines. These

^m Invasive and *in situ* bladder cancers are both included in standard statistical tables. See “*United States Cancer Statistics: 2001 Incidence and Mortality Web-based Report*” footnotes at <http://apps.nccd.cdc.gov/uscs/TableV.asp?group=1a&Year=2001&Gender=FEM&RateType=AgeadjType&TableType=INCI#Footnotes>.

occupational exposures have been estimated to cause 23% of bladder cancers nationwide. Third, chronic bladder problems have been linked to developing bladder cancer. There is also ongoing research into the role genetic predispositions play in allowing certain individuals to detoxify carcinogens at different rates than others.^{11,33,35}

Early detection and education about early symptoms of bladder cancer are necessary to decrease mortality. Since there are no routine screening tests for the early detection of bladder cancer, education must concentrate on making the public aware of the risk factors, most importantly smoking, and the signs and symptoms of bladder cancer. Research must also continue to determine any possible causal relationships between work environments and bladder cancer.^{2,11}

Section 4 – Discussion, Analysis and Recommendations

The Bergen County Cancer Capacity and Needs Assessment is intended to provide a foundation on which local cancer control efforts can be based. This document can be a major component of the CDC's Public Health Practice Standards of Performance for Local Boards of Health in New Jersey.³⁸ The data compiled can easily be incorporated into the local public health performance instrument being implemented in 2005. The Bergen County Capacity and Needs Assessment² can also serve as an informational tool for local health officers in support of the 10 essential public health services as they relate to cancer control and prevention. This study could become the framework for developing a comprehensive cancer prevention and control plan for Bergen County.

The NJ-CCCP Plan, 1996–2000 data from the New Jersey Cancer Registry for incidence, mortality, state ranking, and prevalence, *Healthy New Jersey 2010* recalculated goals, and evidence-based practice examples form the basis for many of the recommendations and strategies for Bergen County. Since Bergen County has the greatest cancer burden in the state, all cancers should continue to be addressed through early detection and education to reduce mortality and increase survivorship. However, recognizing the breadth of the cancer problem, time limitations, and available resources, priorities need to be established based on evidence presented in this study.^{1,2,26,28,37}

There are four cancers that should be given the highest priority based on the evidence presented.^{2,23,24,25} These cancers are breast, colorectal, melanoma, and prostate. The rationale for placing emphasis on these cancers is their greater burden as shown by one or more of the following: incidence rates higher than the state, county prevalence, mortality, and state rank. Lung, cervical, and oral and oropharyngeal cancers must be given continued attention but are not listed as the highest priority, for the following reasons:

- Bergen County is among the counties in the state with a relatively low incidence and mortality rate for lung cancer. Bergen County has reached the *Healthy New Jersey 2010* goal for female lung cancer mortality. What is troublesome is the total burden of cases due to the large population in the county.
- In Bergen County, cervical cancer incidence and mortality rates are lower than the corresponding state rates.

- The incidence rate for oral and oropharyngeal cancers in Bergen County is below the corresponding rate for the state.

County and Local Recommendations

This section presents the goals, objectives, and strategies developed to address the identified issues facing Bergen County so that the county can increase early detection, which will ultimately reduce mortality rates for all cancers.

Highlights

- During the period 1996–2000, Bergen County had the highest number of cancer cases (26,639) in New Jersey.
- Transportation to and from prevention, education, and treatment activities is complicated by an inadequate public transportation system and limitations on the set of activities to which volunteer organizations provide free transportation.^{1,2,5,6,7,12,13}
- Access and funding for healthcare services for low-income residents is inadequate. NJCEED is only funded to serve 18% of the eligible population (<250 Federal Poverty Level).
- Four cancers need priority attention: breast, colorectal, melanoma, and prostate. Cervical, lung, and oral and oropharyngeal cancers need continued attention and bladder cancer needs to be studied due to early data showing an increase among Bergen County females.^{1,2,3,23,24,25,31}

Goal BER I – 1. Strive to meet the *Healthy New Jersey 2010* recalculated goals for incidence, mortality, or staging for breast, colorectal, melanoma, and prostate cancers.

- **Objective BER I – 1.1. Breast Cancer:** Reduce the mortality rate per 100,000 women from 30.1 to 27.7 and increase the percentage of diagnoses at the local or in situ stage from 66% to 85%.
 - **Strategy BER I – 1.1.1.** Develop media campaigns through the Cancer Coalition for early detection of breast cancer for the female population 40+ years. Promote the availability of no-cost breast cancer screenings for the eligible BCNJCEED population.
 - **Strategy BER I – 1.1.2.** Examine NCI/CIS marketing research to target specific clusters that may need breast screening.¹⁰
 - **Strategy BER I – 1.1.3.** Encourage the 65–74 age cohort to continue receiving screening for breast cancer. Among other potentially useful approaches, gynecologists should play a key role in offering such encouragement.
 - **Strategy BER I – 1.1.4.** Conduct focus groups with black, Hispanic, and Asian women 40+ years of age to identify ways in which screening providers could better satisfy their individual needs.

- **Objective BER I – 1.2. Colorectal Cancer:** Increase FOBT screening, colonoscopy, and virtual colonoscopy for colorectal cancer.
 - **Strategy BER I – 1.2.1.** Target women 50+ through women’s organizations and churches to educate and screen for colorectal cancer.
 - **Strategy BER I – 1.2.2.** Improve and refine the reporting and follow-up of patients screened by BCNJCEED for eligible populations and those seeking FOBT cards from BCNJDOH.
 - **Strategy BER I – 1.2.3.** Educate health practitioners to combine screenings. For example, women who are screened for breast or cervical should receive FOBT cards and follow-up.
- **Objective BER I – 1.3. Colorectal Cancer:** Reduce colorectal cancer mortality rates for males from 26.3 to 13.0 and for females from 19.2 to 13.0.
 - **Strategy BER I – 1.3.1.** Identify targeted educational interventions to reduce gaps in awareness and behaviors about colorectal cancer among the 284,675 persons 50 years of age and older (32% of total population).³
 - **Strategy BER I – 1.3.2.** Develop educational messages for widespread dissemination about colorectal cancer through multi-faceted/multi-lingual delivery mechanisms.
- **Objective BER I – 1.4. Melanoma:** Reduce the melanoma incidence rates for white males from 26.0 to 11.3 and for white females from 15.7 to 7.0.
 - **Strategy BER I – 1.4.1.** Develop a media campaign through the cancer coalition to educate the white population on the advantages of using sun screen/ultra violet ray protection during any outdoor activity.
 - **Strategy BER I – 1.4.2.** Partner with the school system to standardize education for sun/ultra violet ray protection in grade school.
 - **Strategy BER I – 1.4.3.** Partner with golf, swim, and tennis clubs to sponsor and educate their membership on the value of sun protection and skin screening for cancer.
 - **Strategy BER I – 1.4.4.** Include a dermatologist on the cancer coalition.
 - **Strategy BER I – 1.4.5.** Utilize the Chambers of Commerce to facilitate the promotion of sun protection efforts for outdoor occupations such as construction, landscaping, and other occupations with outdoor exposure.
- **Objective BER I – 1.5. Prostate Cancer:** Reduce prostate cancer mortality rate for black males from 58.9 to 30.2.
 - **Strategy BER I – 1.5.1.** Expand the *Let’s Tackle Prostate Cancer Together* Campaign to all black churches in Bergen County.
 - **Strategy BER I – 1.5.2.** Distribute the video about prostate cancer produced with Harry Carson to all black churches and community organizations.
 - **Goal BER I – 2.** Improve access to cancer-related healthcare services for low-income, disabled, undocumented, and elderly residents of Bergen County.

- **Objective BER I – 2.1.** Improve transportation in order to provide access to cancer care and screening sites.
 - **Strategy BER I - 2.1.1.** Provide additional free transportation for patients to cancer-related services. With 134,820 county residents age 65 and above, and 43,417 county residents with incomes below 250% of the Federal poverty level, it is likely that many residents need to use means of transportation other than their own cars to access such services.
 - **Strategy BER I - 2.1.2.** Encourage county and local governments to work together to design public transportation that will provide service for patients directly to major area hospitals and care centers.
 - **Strategy BER I – 2.1.3.** Maintain communication between the Planning Board and the Cancer Care Coalition to monitor progress of the County Master Plan for transportation.
 - **Strategy BER I – 2.1.4.** Support funding to subsidize or provide incentives for low-cost transportation with attention to neighborhoods with low median incomes identified by NCI/CIS marketing research.
 - **Strategy BER I - 2.1.5.** Utilize the mobile health van concept to bring services directly to residents in need. This strategy provides an efficient method of screening and basic treatment for areas designated as having high cancer-related needs and limited resources.^{40,41,42}
 - **Strategy BER I – 2.1.6.** Expand current parish nursing programs (5% of faith-based organizations have a basic parish nursing program in place⁷) to include a nurse practitioner and case manager to advocate for and treat the medically underserved and undocumented populations in their parishes.^{43,44}
- **Objective BER I – 2.2.** Advocate for the medically underserved and uninsured to improve cancer-related healthcare access.
 - **Strategy BER I – 2.2.1.** Expand NCI/CIS market research to determine the number of medically underserved in Bergen County.¹⁰
 - **Strategy BER I – 2.2.2.** Advocate for additional financial support to provide screening and early treatment for the medically underserved.
 - **Strategy BER I – 2.2.3.** Solicit support of the current cancer coalition, community groups, and hospitals to provide needed manpower to extend assistance in education and navigation of the healthcare system beyond what is already provided by the ACS and other organizations.
 - **Strategy BER I – 2.2.4.** Advocate for additional funding for BCNJCEED and the Partnership for Community Health to increase screening and care of eligible persons.
- **Objective BER I – 2.3.** Increase access and promote awareness of cancer prevention, early detection, and treatment among minority populations for the seven priority cancers and bladder cancer.
 - **Strategy BER I – 2.3.1.** Utilize community groups and faith-based organizations to disseminate information about cancer prevention and available resources.

- **Strategy BER I – 2.3.2.** Encourage the Partnership for Community Health and BCNJCEED to facilitate the coordination of support teams from community leaders.
- **Strategy BER I – 2.3.3.** Implement the use of mobile health vans and expanded parish nursing programs that include a nurse practitioner who can screen and treat those in need.^{41,42,43,44,45}
- **Strategy BER I – 2.3.4.** Create multi-lingual information media, videos, and brochures to be used by community groups, schools, and hospitals to address the language barrier issue.^{2,7}

Goal BER I – 3. Increase awareness of cancer prevention and healthy lifestyle practices essential to accomplish the reduction of all cancers.^{1,2,5,6,7,8,11}

- **Objective BER I - 3.1.** Create a comprehensive and coordinated education campaign about cancer prevention and detection for Bergen County adults and youth.
 - **Strategy BER I – 3.1.1.** Enhance the current school curriculum through a partnership with the Cancer Coalition, ACS, and the school system. Standardize curricula to ensure all students are educated about healthy lifestyle choices (safe sex, diet, obesity, smoking, alcohol, sun exposure and self-screening) that impact cancer.^{1,2,11}
 - **Strategy BER I – 3.1.2.** Utilize presentations, videos, and health fairs to educate adults and youth.
 - **Strategy BER I – 3.1.3.** Increase awareness of screening practices and resources for the adult community, especially the population aged 65+. Utilize churches, community organizations, and staff of over-55 communities to help facilitate this strategy.^{1,2,3,5,7,23}

Goal BER I – 4. Expand the priority cancers to include bladder, oral, and oropharyngeal cancers and enhance current strategies in place to decrease the burden of cancer in Bergen County through early detection.

- **Objective BER I – 4.1.** Expand scope of responsibility for NJCEED and/or Cancer Coalition.
 - **Strategy BER I – 4.1.1.** Explore funding and grants to support provision of treatment for the uninsured NJCEED-eligible population when screening identifies early signs of cancer.
 - **Strategy BER I – 4.1.2.** Provide further study of urinary bladder cancer to identify reasons for a possible increasing incidence trend in females and the reasons Bergen County has a higher rate of bladder cancer than the state.^{2,23}
 - **Strategy BER I – 4.1.3.** Support funding for BCNJCEED to increase education and screening for priority cancers; expand efforts to include oral and oropharyngeal screening.
 - **Strategy BER I – 4.1.4.** Address melanoma in Bergen County with additional strategies brainstormed by the Cancer Coalition because melanoma incidence may be increasing in Bergen County for white females²³ and county rates of melanoma among males and females are higher than the state rates.²

- **Strategy BER I – 4.1.5.** Explore strategies to effect further reduction in smoking, tobacco, and betel nut herbal usage in order to decrease all cancer incidence where smoking, tobacco, betel nut quid herbal, and second-hand smoke are risk factors.
- **Strategy BER I – 4.1.6.** Educate high school students about the hazards of smoking since it is estimated that 40% of Bergen County youth have smoked or are current smokers.^{1,2,11,13,14,15,16,33}
- **Strategy BER I – 4.1.7.** Include a dentist on the Cancer Care Coalition.

Recommendations for Statewide Priorities

The NJ-CCCP defined statewide priorities as they relate to the prevention, early detection, and treatment of cancer. Most of the identified needs in Bergen County are similar to those identified as priorities in the state. In fact, the implementation of county recommendations is, for the most part, dependent on the success of initiatives and budget actions of the state.^{1,2}

Recommendations and Strategies for New Jersey

Recommendation BER II – 1. Advocate for increased access to quality cancer care, prevention, early detection and awareness programs.^{1,2}

- Advocate for an increased level of financial support for NJCEED programs, particularly for education, awareness, and screening within minority populations and areas of poverty.²
- Support financial incentives to fund transportation services for those segments of the population needing transportation service to access care.²
- Advocate providing all residents of New Jersey with adequate health care coverage relating to cancer prevention, control, and treatment.²
- Advocate for additional funding so treatment of cancers identified during screening is provided immediately. This is an important strategy for Bergen County because 13% of the population does not have health insurance.

Recommendation BER II – 2. Support and expand prevention and education programs for youth and adults.²

- Mandate a cohesive standardized curriculum that covers good nutrition, physical exercise, and healthy lifestyle education. Enhance current programs that cover tobacco use, drugs, and other substance abuse.²
- Support media campaigns to highlight cancer needs in New Jersey, available cancer-related community services, and programs addressing gaps in care.²
- Develop programs that specifically target medically underserved populations for screening and treatment.²

Recommendation BER II – 3. Increase public education efforts to increase access and reduce barriers to cancer prevention, detection, and treatment.²

- Update – utilizing the CRDNJ – and disseminate *A Resource Book for Cancer Patients in New Jersey*³⁹ to community organizations that can assist in the distribution of information. This is important to Bergen County since plans are under way to duplicate this methodology with a Bergen County directory.³⁹
- Educate the public about access to clinical trials. Make trials available to all without regard to insurance, income level, race, or cultural orientation.²
- Provide economic incentives to dentists, doctors, and clinics to encourage them to accept low-income patients. Consider relief of medical/dental school loans in exchange for service to the underserved population.²
- Investigate implementing sliding-scale charges for NJCEED.

Recommendation BER II – 4. Reduce cancer-related health disparities among minorities, seniors, and the medically underserved.²

- Encourage public-private partnerships to expand health communication efforts for cancer in Bergen County. The Partnership for Community Health has engaged public and private entities, and expansion of their activities should be supported.
- Advocate for funding to support care for underserved minorities and seniors. This strategy is critical for Bergen County, where the total number of cancer cases is the highest in the state (25,639) and the population is aging. In addition, Bergen County has the largest population in the state (884, 118), and an estimated 13% of the population is uninsured.
- Identify, evaluate, and monitor issues related to healthcare access for immigrant populations. Bergen County has experienced a dramatic increase in its Asian and Hispanic populations in the last decade (72% and 84%, respectively).

Closing Remarks

The Cancer Capacity and Needs Assessment provides a detailed baseline assessment for Bergen County. The data, interpretations, and recommendations in this report were developed to provide a wide array of public health and medical personnel with standardized information and detailed analyses that can help guide and focus their efforts at the county level, including such local health initiatives as the forthcoming Community Health Improvement Plans. The reports from all of the counties will collectively inform the continuing comprehensive cancer control efforts of the Office of Cancer Control and Prevention of the New Jersey Department of Health and Senior Services; the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey; and the University of Medicine and Dentistry of New Jersey.

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